

**Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form**

1. Applying for (select one): ☒ (a) Prop 13 Urban Water Conservation Capital Outlay Grant
☐ (b) Prop 13 Agricultural Water Conservation Capital Outlay Feasibility Study Grant
☐ (c) DWR Water Use Efficiency Project
2. Principal applicant (Organization or affiliation): City of San Joaquin
3. Project Title: 2002 Water System Maintenance Project
4. Person authorized to sign and submit proposal:
- | | |
|-----------------|----------------------------------|
| Name, title | <u>Shahid Hami, City Manager</u> |
| Mailing address | <u>P. O. Box 758</u> |
| Telephone | <u>San Joaquin, CA 93660</u> |
| | <u>(559) 693-4311</u> |
| Fax. | <u>(559) 693-2193</u> |
| E-mail | |
5. Contact person (if different):
- | | |
|------------------|------------------------------------|
| Name, title. | <u>Gary Horn, City Engineer</u> |
| Mailing address. | <u>1300 E. Shaw Avenue, Su 176</u> |
| Telephone | <u>Fresno, CA 93710</u> |
| | <u>(559) 244-3123</u> |
| Fax. | <u>(559) 244-3120</u> |
| E-mail | <u>ghorn@yandhengr.com</u> |
6. Funds requested (dollar amount): \$270,000.00
7. Applicant funds pledged (dollar amount): None
8. Total project costs (dollar amount): \$270,000
9. Estimated total quantifiable project benefits (dollar amount): \$284,000
- Percentage of benefit to be accrued by applicant: 100%
- Percentage of benefit to be accrued by CALFED or others: 0%

**Consolidated Water Use Efficiency 2002 PSP
Proposal Part One:
A. Project Information Form (continued)**

10. Estimated annual amount of water to be saved (acre-feet): 1.4
- Estimated total amount of water to be saved (acre-feet): 70
- Over ____ years 50
- Estimated benefits to be realized in terms of water quality, instream flow, other: None
11. Duration of project (month/year to month/year): 10/02 to 8/03
12. State Assembly District where the project is to be conducted: 30
13. State Senate District where the project is to be conducted: 16
14. Congressional district(s) where the project is to be conducted: 20
15. County where the project is to be conducted: Fresno
16. Date most recent Urban Water Management Plan submitted to the Department of Water Resources: _____
17. Type of applicant (select one):
- Prop 13 Urban Grants and Prop 13 Agricultural Feasibility Study Grants:
- ☒ (a) city
☐ (b) county
☐ (c) city and county
☐ (d) joint power authority
☐ (e) other political subdivision of the State, including public water district
☐ (f) incorporated mutual water company
- DWR WUE Projects: the above entities (a) through (f) or:
- ☐ (g) investor-owned utility
☐ (h) non-profit organization
☐ (i) tribe
☐ (j) university
☐ (k) state agency
☐ (l) federal agency

18. Project focus:

- ☐ (a) agricultural
☒ (b) urban

Consolidated Water Use Efficiency 2002 PSP

Proposal Part One:

A. Project Information Form (continued)

19. Project type (select one):

Prop 13 Urban Grant or Prop 13
Agricultural Feasibility Study Grant
capital outlay project related to:

- ☒ (a) implementation of Urban Best
Management Practices
☐ (b) implementation of Agricultural Efficient
Water Management Practices
☐ (c) implementation of Quantifiable
Objectives (include QO number(s))

.....
☐ (d) other (specify)
.....

DWR WUE Project related to:

- ☐ (e) implementation of Urban Best
Management Practices
☐ (f) implementation of Agricultural Efficient
Water Management Practices
☐ (g) implementation of Quantifiable
Objectives (include QO number(s))
☐ (h) innovative projects (initial
investigation of new technologies,
methodologies, approaches, or
institutional frameworks)
☐ (i) research or pilot projects
☐ (j) education or public information
programs
☐ (k) other (specify)
.....

20. Do the actions in this proposal involve
physical changes in land use, or
potential future changes in land use?

- ☐ (a) yes
☒ (b) no

If yes, the applicant must complete the CALFED
PSP Land Use Checklist found at
http://calfed.water.ca.gov/environmental_docs.ht

[ml](#) and submit it with the proposal.

PROPOSITION 13 URBAN WATER CONSERVATION GRANT

CITY OF SAN JOAQUIN 2002 WATER SYSTEM MAINTENANCE PROJECT

PROPOSAL PART TWO

Project Summary

This project consists of replacement of existing leaking water mains, installation of new water valves and replacement of a leaking fire hydrant for the water system of the City of San Joaquin. The project will enable the City to conserve water by eliminating existing leaking facilities and allow a more water-efficient operation of the municipal water system. The proposed project will also eliminate costly maintenance by City public work personnel. The cost of the project is \$270,000 and the anticipated savings are \$284,000 over the life of the project. The estimated amount of water to be saved annually is 1.4 acre-feet.

1. Scope of Work: Relevance and Importance

1. Nature, scope and objectives of the project.

1. Replacement of 1,800 feet of existing 4" steel water main with a new 6" PVC water main in the Idaho/Oregon alley from Manning Avenue to Pine Street. This steel main has deteriorated and City crews have made numerous repairs to the line over the last five years. This main serves fifty-two homes, and new services will be installed from the main to the property line. No work will be done on private property.
2. Replacement of 2,700 feet of existing 2" steel water main with 1,300 feet of 6" and 1,400 feet of 12" PVC water mains in Railroad Avenue from Ninth Street to 1,400 feet North of Pine Street. This existing main serves 4 business and 1 residence. New services will be installed for each customer. The existing main is on private property and access to make repairs is limited and difficult. The steel line has deteriorated and City crews have made numerous repairs. The new

main will be placed in public street rights of way.

3. Seven new shut-off valves will be installed at various locations on existing water mains in the City. These valves will allow water mains to be isolated so that the amount of water lost during repairs will decrease.
4. An existing leaking fire hydrant will be replaced with a new hydrant.
2. Scope of Work: Technical/Scientific Merit, Feasibility, Monitoring and Assessment
 1. Methods, procedures and facilities. The project will replace leaking facilities with new materials that will resist corrosion and require less maintenance.
 2. Task List and Schedule. See Table A, attached
 3. Monitoring and Assessment. Repair records for the City Public Works Department for a period of ten years will keep the proposed facilities. These records will document repairs made to the installed facilities, if any.
 4. Preliminary Plans and Specifications and Certification Statements. See attached.
3. Qualifications of the Applicants and Cooperators.
 1. Gary D. Horn, San Joaquin City Engineer, will be the project manager. His resume and a brief company profile for Yamabe & Horn Engineering, Inc. are attached.
 2. The City of San Joaquin operates the municipal water system and no external cooperators will be involved. Licensed pipeline contractors will perform the construction.
4. Benefits and Costs.
 1. Budget. A detailed engineer's estimate is attached. A 10% contingency has been added to the project cost to cover unanticipated construction related costs due to unknown field conditions.
 2. Cost-Sharing. The City of San Joaquin does not propose any cost sharing.
 3. Benefit Summary and Breakdown.

1. Project outcomes and benefits. The outcome of the project will be to reduce the amount of water lost and reduce the maintenance cost to the City of San Joaquin for caused by the existing water mains. The City averages five breaks per year on the two lines being replaced. Each repair requires that the lines be flushed prior to being placed back in service. The repairs also require 24 man-hours to repair, along with equipment and material costs. The City of San Joaquin will realize the benefit.
2. Non-quantifiable benefits. Each break in the water main requires that the line be taken out of service. There will be non-quantified benefit to the residents served by these mains in the increased level of service provided by the City water system.
4. Assessment of Costs and Benefits.
 1. Assumptions. The project will eliminate costs currently being incurred by the City.
 1. Each break in the water main requires 24 man-hours to repair at a cost of \$50 per hour, a backhoe at \$800 and service truck at \$400. Material costs are \$900.
 2. Flushing the water main after repair for 60 minutes at 1,500 g.p.m. requires 90,000 gallons of water.
 3. Inadequate shut-off valves require 4 man-hours of additional staff time for water main isolation at \$50 per hour.
 2. Cost Benefit.
 1. Each break costs \$3,300 to repair and the City averages 5 breaks per year at a total cost of \$16,500.
 2. Water production costs for the City are \$1.12 per thousand gallons of water, for a cost of \$100 per break or a total of \$500 per year.

3. Inadequate shut-off valves cost \$200 per incident and the City averages 5 incidents per year for a total of \$1,000 per year.
 4. The total cost savings is estimated at \$18,000 per year.
3. Present Value. The present value of the benefit over the 50-year life of the project at a 6% discount rate is \$284,000.
4. The present cost of the project is \$270,000. The Present Value of the savings is \$284,000. The City of San Joaquin will realize all benefits of the project.
5. Benefit/Cost Ratio. The B/C Ratio is 1.05.
5. Outreach, Community Involvement and Acceptance. The residents and business owners affected by the project will be notified by a bilingual letter outlining the project and inviting them to a town-hall meeting. Approximately 150 residents and 3 businesses will benefit from the project. The major benefit will be a continuous supply of water since fewer repairs to the old water mains will be required, and fewer instances of the water being turned off.

Preliminary Engineer's Estimate
 2002 WATER SYSTEM MAINTENANCE PROJECT
 City of San Joaquin

February 25, 2002

<u>Description</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Extension</u>
CONSTRUCTION			
12" PVC Water Main	1,400 lf	\$ 30.00	\$ 42,000
6" PVC Water Main	3,100 lf	20.00	62,000
12" Valve, New Construction	2 ea	850.00	1,700
Install 8" Valve in Existing Main	3 ea	1,000.00	3,000
6" Valve, New Construction	6 ea	500.00	3,000
Install 6" Valve in Existing Main	4 ea	800.00	3,200
Install 4" Valve in Existing Main	1 ea	600.00	600
2" Water Service	4 ea	1,000.00	4,000
1" Water Service	52 ea	850.00	44,200
Fire Hydrants	3 ea	2,500.00	7,500
Trench Resurfacing	6,200 sf	6.00	37,200
Mobilization		Lump Sum	5,000
Traffic & Dust Control		Lump Sum	9,600
			-
	Total Construction	\$	223,000
MISCELLANEOUS			
Design Engineering		\$	13,000
Construction Staking			4,400
Inspection & Testing			4,400
Contract Administration			3,200
Contingency			22,000
	Total Miscellaneous	\$	47,000
99-150\02 water est	Total Project Cost	\$	270,000

TABLE A
CITY OF SAN JOAQUIN
2002 WATER SYSTEM MAINENANCE PROJECT

TASK LIST AND SCHEDULE

NO.	TASK	START	END	COST	QUARTERLY EXPENDITURE			
					4 QTR 02	1 QTR 03	2 QTR 03	3 QTR 03
1	DESIGN ENGINEERING PLANS & SPECS	10/1/2002	2/1/2003	\$ 13,000	\$ 13,000	\$ 26,000		
2	CONSTRUCTION	4/1/2003	7/1/2003	\$ 245,000		\$ 245,000	\$ 245,000	
3	STAKING, INSPECTION TESTING & CONTRACT ADMIN	4/1/2003	8/1/2003	\$ 12,000		\$ 12,000	\$ 10,000	\$ 2,000
TOTAL				\$ 270,000	\$ 13,000	\$ 283,000	\$ 255,000	\$ 2,000

99-150\RTASK
2/25/2002